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APPLICANT : NIPPON TELEGR & TELEPH CORP
<NTT>;

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TITLE : PRODUCTION OF
SUPERCONDUCTOR

(M 1) x (M 2) y (M 3) z O w

ABSTRACT : PURPOSE: To produce a high temp. superconductor having a sharp transition temp. width and superior characteristics in a short time and at low temp. with satisfactory reproducibility by heat treating an alkali hydrolyzed or solvolyzed product of a mixture of specified amts. of halides or nitrates of elements constituting an aimed material.

CONSTITUTION: Each specified amt. of halide or nitrate of at least one kind of element M_1 selected from B, Al, Ga, In, Ti, Sc, Y, and lanthanides (La~Lu), at least one kind of element M_2 selected from Be, Mg, Ca, Sr, Ba, Ra, Sn, and Pb, and an element $M_3(=Cu)$ is hydrolyzed or solvolyzed under heating or without heating after adding, if necessary, an org. material having ≥ 2 OH groups, in the presence of an alkali hydrolyzing agent or a solvolyzing agent (such as tetraalkyl ammonium hydroxide) contg. no alkali metal capable of generating OH ions or alkoxide ions in aq. soln. or in an org. solvent. The hydrolyzed or solvolyzed product is isolated, and heated in (non)oxygen atmosphere, to obtain thus a superconductor expressed by formula (wherein x~w are optional mole fractions).

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